### Message

From: Donohue, Joyce [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BB5340EC745149EDBF80D2B8B2F9B919-JDONOHUE]

**Sent**: 5/23/2017 5:06:52 PM **To**: Erika Chan [e.chan@lek.com]

**Subject**: RE: LEK Consulting - Follow-up questions about PFASs

Attachments: Loeveless et al-subchronic..pdf; Sundstron et al-PK, 2012.pdf; Lee et al-2016-neuro.pdf; Butenhoff et al-repro-2009-

main.pdf; Balesteros et al-thyroid-PFHxS, PFOS, PFNA-2017.pdf

#### Dear Erica:

My communication error. PFOA and PFOS are on the CCL. Because they were part of a group that could be analyzed using the same chemical method, PFNA, PFHpA, PFHxs and PFBS were on UCMR3 in addition to PFOA and PFOS. That does not put them on the CCL but does make us pay attention to them and look at their toxicity to determine if there is a problem. You can check the latest data posting from UCMR3 to see the frequency of detection.

When we spoke, I told you that MN has a guidelines for PFBS, New Jersey, has one for PFNA, We are working with the PFHxS data at present. The PFHpA is a difficult one because it is not manufactured. It must be a terminal degradation product from another PFAS compound. I do not believe it has any Tox data. Mn also has a PFBA guideline.

I said that I would send you a couple of animal papers on the PFHxS. I told you that there are not too many. They are attached. Excuse my delay. There are several studies on the neurotox by the same group. I sent you the most recent

From: Erika Chan [mailto:e.chan@lek.com] Sent: Tuesday, May 23, 2017 9:41 AM

To: Donohue, Joyce < Donohue. Joyce@epa.gov>

Subject: RE: LEK Consulting - Follow-up questions about PFASs

Dear Joyce,

Thank you for the response! Are the short-chain fluorosurfactants currently on the CCL? I took a quick look through the list but I don't think I saw it?

Best, Erika

### ERIKA CHAN • L.E.K. CONSULTING

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From: Donohue, Joyce [mailto:Donohue.Joyce@epa.gov]

**Sent:** Monday, May 22, 2017 1:52 PM **To:** Erika Chan <<u>e.chan@lek.com</u>>

Subject: RE: LEK Consulting - Follow-up questions about PFASs

Dear Erica:

It takes at least 10 years. We have 5 years to do a Contaminant Candidate List (CCL) and then another 5 years to decide whether a regulation is needed. When a positive regulatory decision is made, the agency has two years to do a proposal and another year and a half to finalize the proposal. If the regulatory decision is negative there is an option to do a

nonregulatory Health Advisory. In some cases we have done it with the determination or before the determination as was the case with PFOA and PFOS. We have also done the Health Advisory after the determination (e.g. boron and manganese). It probably took 18 months for those two but it was a long time ago so I am not totally sure. The story for perchlorate has gone on for longer than the 20 years I have been at the agency.

Joyce

From: Erika Chan [mailto:e.chan@lek.com]
Sent: Monday, May 22, 2017 10:13 AM

To: Donohue, Joyce < Donohue. Joyce@epa.gov>

Subject: LEK Consulting - Follow-up questions about PFASs

Hi Joyce,

Thank you again for taking the time out to chat last week! We're working on getting a better sense of how long it takes to get regulation in place. For the long chain, I remember you mentioned you took over the project in 2009, but do you know when the research had originally started? Also, for the short-chain, what would be your estimate of how long it takes to go through the entire process (conduct studies, get peer reviewed, etc.)? Would it be closer to 10 years, 15 years, etc?

Also, please let me know if you have any other examples of chemicals that were found to have negative health effects and were later regulated. Thanks again for your help Joyce, and let me know if you have any questions!

Best, Erika

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